

WHAT IS CLAIMED IS:

5

1. A recording medium drive unit, comprising:  
an insertion opening through which a recording  
medium is inserted;

10 a holder receiving the recording medium inserted  
through the insertion opening;

a connector;

a holder drive part moving the holder to a  
loading position so that the recording medium is connected  
to the connector; and

15 a clamp mechanism pressing opposing sides of the  
recording medium when the recording medium is inserted  
into the holder, the clamp mechanism being provided to a  
side of the holder so as to be slidable thereon,

20 wherein the clamp mechanism holds the recording  
medium by the opposing sides thereof.

25 2. The recording medium drive unit as claimed  
in claim 1, wherein the clamp mechanism comprises an  
engagement member, the engagement member engaging recesses  
provided to the opposing sides of the recording medium in  
conjunction with the insertion of the recording medium  
30 into the holder, the clamp mechanism controlling an  
escaping operation of the engagement member as the holder  
moves.

3. The recording medium drive unit as claimed in claim 1, wherein the holder drive part comprises:

a motor rotatable in forward and reverse directions;

5 a detection switch detecting insertion of the recording medium in an insertion direction into a clamp position inside the holder;

a transmission mechanism transmitting a rotational driving force of the motor to the holder;

10 a control part starting the motor based on a detection signal output from the detection switch, the control part stopping forward rotation of the motor when the holder and the recording medium held by the clamp mechanism reach the loading position.

15

4. The recording medium drive unit as claimed in claim 3, further comprising:

20 an ejection detection member detecting an ejection operation; and

an initial position detection part detecting that the holder is in an initial position,

25 wherein the control part rotates the motor in the reverse direction based on a signal output from the ejection detection member so that the recording medium is transported in an ejection direction to be ejected, the control part stopping rotating the motor based on the  
30 detection by the initial position detection part.

5. The recording medium drive unit as claimed in claim 4, wherein the control part controls voltage supplied to the motor, the control part applying high voltage to the motor and driving the holder in the ejection direction, the control part, after the recording medium is disconnected from the connector, constantly applying the high voltage to the motor so that the holder moves in the ejection direction.

10

6. The recording medium drive unit as claimed in claim 3, wherein the control part controls voltage supplied to the motor, the control part applying high voltage to the motor and moving the holder toward the loading position when the insertion of the recording medium into the holder is detected, the control part applying low voltage to the motor immediately before the recording medium is connected to the connector and moving the holder, the control part, after counting a predetermined period of time after starting applying the low voltage to the motor, applying the high voltage to the motor and moving the holder so that the recording medium is connected to the connector.

30 7. The recording medium drive unit as claimed in claim 3, wherein:

the holder is adapted so that each of a plurality of recording media having different sizes along

the insertion direction is selectively insertable into the holder as the recording medium; and

the holder drive mechanism, irrespective of the size of the recording medium inserted into the holder, rotates the motor and draws the recording medium to an inside of the recording medium drive unit, the holder drive mechanism stopping rotating the motor when it is detected that an end of the recording medium in the insertion direction has moved to the loading position.

10

8. The recording medium drive unit as claimed in claim 3, further comprising:

a lid member closing the insertion opening; and an opening and closing mechanism moving the lid member to a closing position to close the insertion opening or to an opening position to open the insertion opening as the holder moves,

wherein the opening and closing mechanism, when the recording medium is inserted, moves the lid member to the closing position in conjunction with movement of the holder toward the loading position if the recording medium is small in size in the insertion direction.

9. The recording medium drive unit as claimed in claim 8, wherein the opening and closing mechanism, when the recording medium is inserted, moves the lid member out of a medium transportation path through which

the recording medium passes, and causes an end of the recording medium in an ejection direction opposite to the insertion direction to close the insertion opening if the recording medium is large in size in the insertion  
5 direction.

10 10. The recording medium drive unit as claimed in claim 8, wherein the opening and closing mechanism opens the insertion opening by moving the lid member out of the medium transportation path when the motor is rotated in the reverse direction to move the holder in the  
15 ejection direction by an ejection operation.

20 11. The recording medium drive unit as claimed in claim 3, further comprising:

a lid member closing the insertion opening; and  
an opening and closing mechanism moving the lid member to a closing position to close the insertion  
25 opening or to an opening position to open the insertion opening as the holder moves,

wherein: the opening and closing mechanism, when the recording medium is inserted, moves the lid member to the closing position in conjunction with movement of the  
30 holder toward the loading position if the recording medium has a first size in the insertion direction; and

the opening and closing mechanism, when the recording medium is inserted, moves the lid member out of

a medium transportation path through which the recording medium passes, and causes an end of the recording medium in an ejection direction opposite to the insertion direction to close the insertion opening if the recording  
5 medium has a second size in the insertion direction, the second size being greater than the first size.

10

12. The recording medium drive unit as claimed in claim 1, wherein the clamp mechanism comprises first and second parts holding one and the other of the opposing sides of the recording medium so that the recording medium  
15 is held between the first and second parts of the clamp mechanism.

20

13. A recording medium drive unit, comprising:  
an insertion opening through which a recording medium is inserted;

a holder receiving the recording medium inserted  
25 through the insertion opening;

a holder drive part moving the holder to a loading position or an initial position,

wherein:

the holder is adapted to selectively receive, as  
30 the recording medium, each of a plurality of recording media having different sizes along an insertion direction in which the recording medium is inserted into the holder, and to have the recording medium attached to or detached

from the holder substantially horizontally with respect to the holder; and

when the holder is driven to the initial position by the holder drive part and ejects the recording medium to be in a stationary state, at least an end of the recording medium in an ejection direction opposite to the insertion direction is positioned to project from the insertion opening if the recording medium is one having the smallest size, and the recording medium projects from the insertion opening with such an amount of projection as to prevent the recording medium from falling off the holder if the recording medium is one having the largest size.